

A ഖേമക - മൂലധനന രേഖ

(I) (a)

(i) ജന്മ

(iv) ജന്മ

(ii) ജന്മ

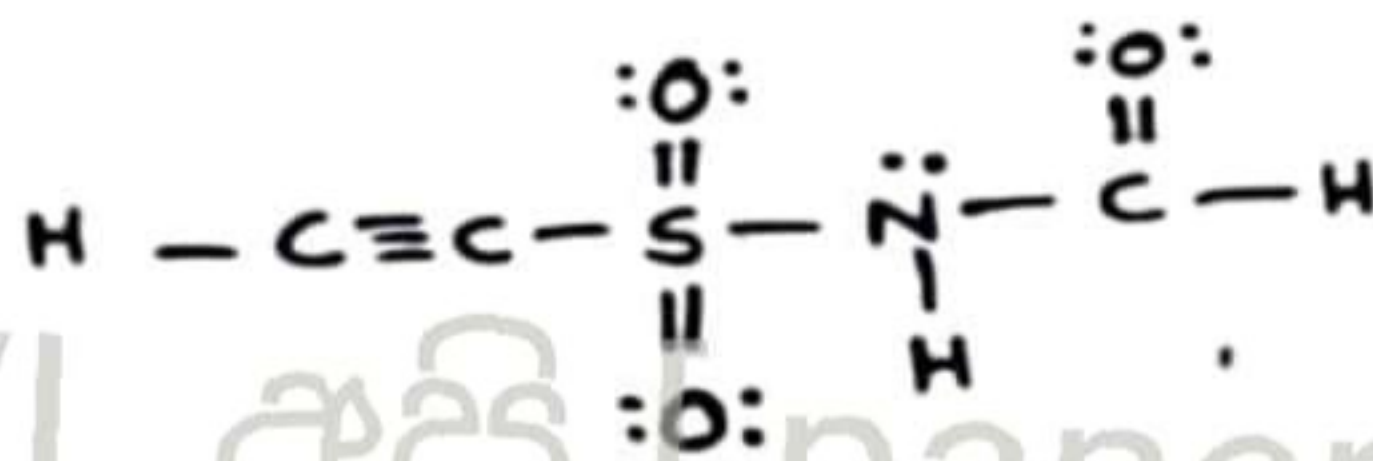
(v) മൂലധന

(iii) മൂലധന

(03 x 5) → 15

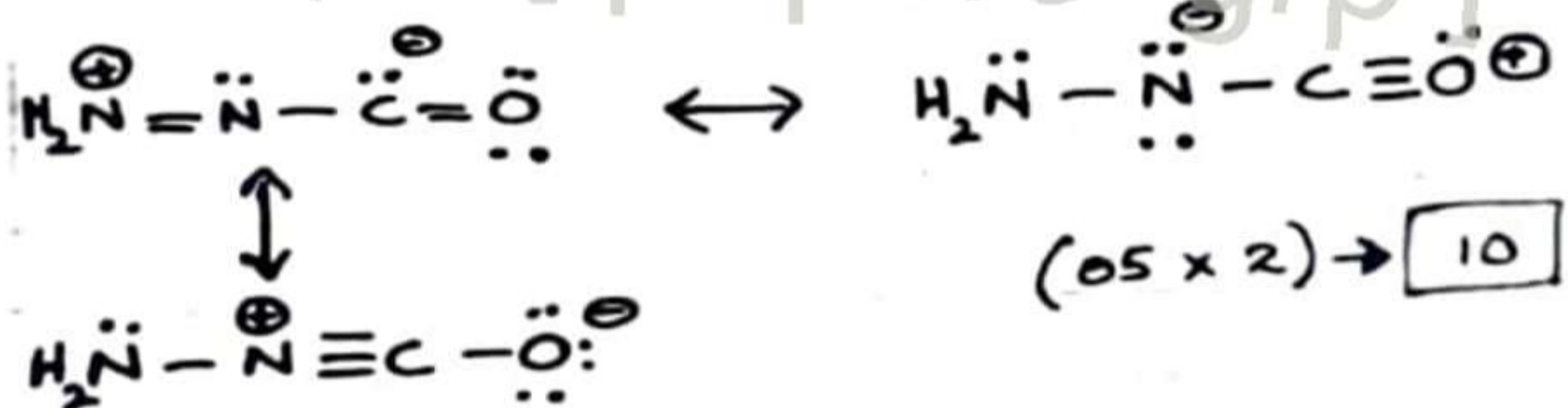
(b)

(i)



10

(ii)



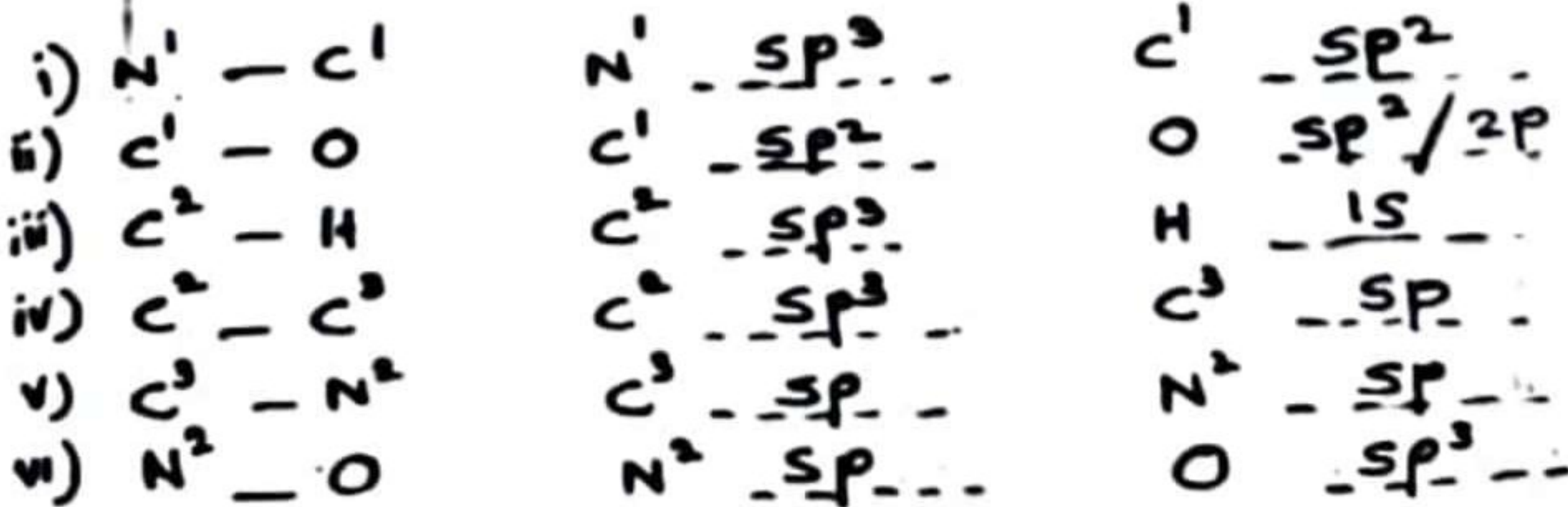
(05 x 2) → 10

(iii)

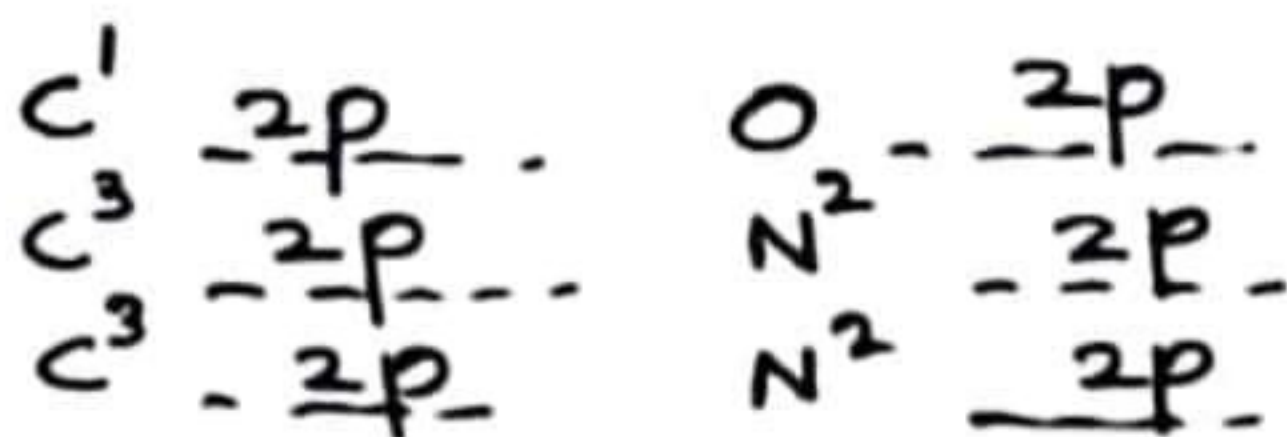
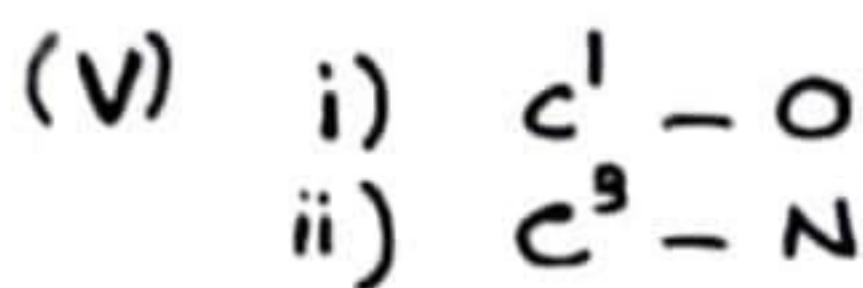
	N ¹	C ¹	C ³	N ²
I VSEPR ക്രമം	4	3	2	2
II e ക്രമം കണക്കാക്കുക	ജന്മകരക	ജന്മകരക	ജന്മകരക	ജന്മകരക
III ജന്മകരക	ജന്മകരക	ജന്മകരക	ജന്മകരക	ജന്മകരക
IV ഉപയോക്താവ്	sp ³	sp ²	sp	sp

(01 x 16) → 16

(iv)



(01 x 12) → 12



(01 x 6) → 06

(C) (i) $\lambda = \frac{h}{mv}$ → 03

അളവ് $(mv) = \frac{h}{\lambda} = \frac{6.626 \times 10^{-34} \text{ Js}}{0.4 \times 10^{-9} \text{ m}}$ → 03

$mv = 1.656 \times 10^{-24} \text{ kg ms}^{-1}$
 അതിനാൽ $\approx 1.66 \times 10^{-24} \text{ kg ms}^{-1}$ → 02

(ii) 22 A/L papers grp

ചലന ഊർജ്ജം $E = \frac{1}{2} mv^2$ → ① 01

ചലന ഊർജ്ജം രണ്ടരമടങ്ങിയിരിക്കുന്ന
 വോൾട്ട് V_1 ആണ്

$4E = \frac{1}{2} mV_1^2$ → ② 03

①/② $V_1 = 2V$ 03

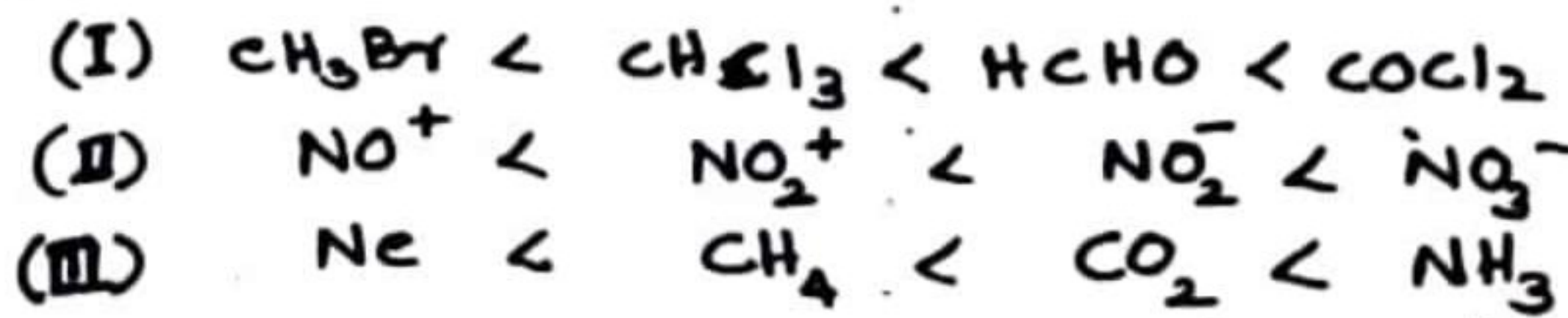
അതിനാൽ $\lambda \propto \frac{1}{V}$ $\lambda V = \lambda_1 V_1$

$\therefore \lambda_1 = \frac{\lambda}{2}$ 02

$\lambda_1 = \frac{0.4 \text{ nm}}{2} = 0.2 \text{ nm}$ 02

അതിനാൽ
 ഏകദേശം
 കണക്കാക്കി
 (ii) e. 06

(iii)



(05 x 3) → 15

2

(a) (i) C → 05

(ii) മിഥൺ , ട്രൈഓക്സിജൻ , ഗ്രൂപ്പിംഗ് → 06

(iii) $X_1 - CO_2$ $Y - BaCO_3$ അല്ലെങ്കിൽ $BaSO_3$
 $X_2 - SO_2$
 $X_3 - CO$ (03 x 5) → 15

(iv) (a) $C + 2H_2SO_4 \rightarrow CO_2 + 2SO_2 + 2H_2O$

(b) $BaSO_3 + H_2O_2 \rightarrow BaSO_4 + H_2O$ (4)
 (05 x 2) → 10

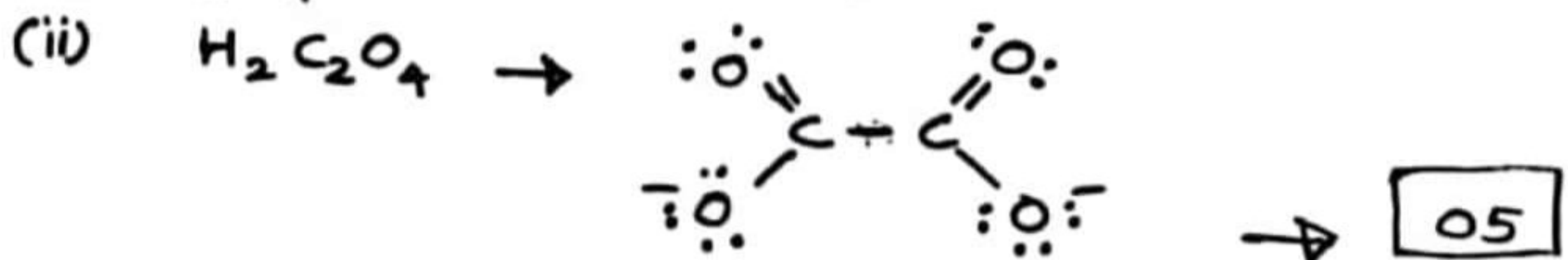
(v) X/C → വ്യക്തിഗതമായ രാസ
 - ധാരാളം വികാസങ്ങൾ ഉണ്ടാകുന്നതിനുള്ള സാധ്യത

X_3/CO - ധാരാളം വികാസങ്ങൾ : ഉയർന്ന
 മിഥുനങ്ങൾക്ക് രാസ

അല്ലെങ്കിൽ ഉയർന്ന

(02 x 2) → 04

(b) (i) $C_2O_4^{2-}$ → 05

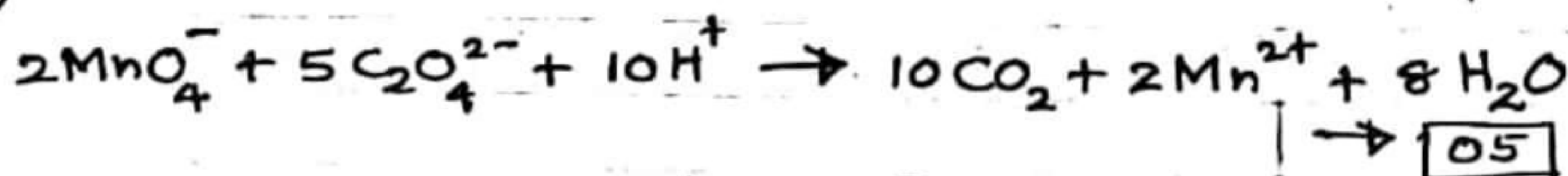


(iii) +3 → 02

(iv) CO_3^{2-} $\rightarrow$ CO_3^{2-}
 വ്യക്തിഗതമായ രാസ
 അല്ലെങ്കിൽ വികാസങ്ങൾ ഉണ്ടാകുന്നതിനുള്ള സാധ്യത
 ഉയർന്ന മിഥുനങ്ങൾക്ക് രാസ
 (03 x 2) → 06

03

(v)



(vi) - KMnO_4 සමයං දර්ශකයක් ලෙස ක්‍රියාකරයි

- අන්ත ලක්ෂ්‍යයේදී ස්ථිර රෝප වර්ණය

හෝ අන්ත ප්‍රාචය ස්ථිර ලං රෝප පාටාව (02x2) $\rightarrow \boxed{04}$

(vii) ප්‍රමාණය ප්‍රමාණය රචකිත / 60°C පමණ රචකිත

$\rightarrow \boxed{03}$

(C) (i) A - AgNO_3

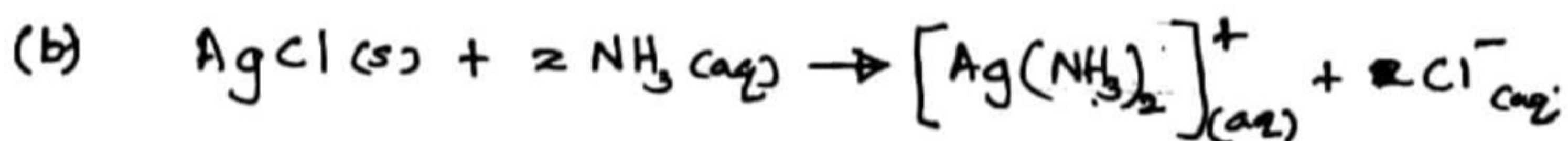
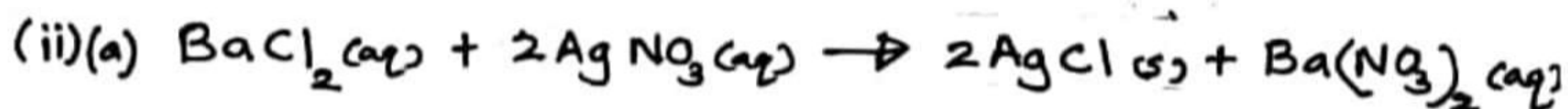
B - K_2CO_3

C - $\text{Al}_2(\text{SO}_4)_3$

D - $\text{Mg}(\text{NO}_3)_2$

E - NaCl

(04x5) $\rightarrow \boxed{20}$



$\rightarrow (05 \times 2) \rightarrow \boxed{10}$

22 A/L අපි [papers grp]

(a)

$$(i) \text{ NaOH මුළු ප්‍රමාණය} = \frac{4 \times 10^{-4} \text{ g}}{40 \text{ g mol}^{-1}} = 1 \times 10^{-5} \text{ mol} \rightarrow \text{ලකුණු 05}$$

$$[\text{OH}^-] = 1 \times 10^{-5} \text{ mol dm}^{-3}$$

$$K_w = [\text{H}^+][\text{OH}^-]$$

→ ලකුණු 05

$$[\text{H}^+] = \frac{K_w}{[\text{OH}^-]} = \frac{1 \times 10^{-14} (\text{mol dm}^{-3})^2}{1 \times 10^{-5} \text{ mol dm}^{-3}}$$

$$= 1 \times 10^{-9} \text{ mol dm}^{-3}$$

→ ලකුණු 05

$$\text{pH} = -\log \frac{[\text{H}^+]}{1.0 \text{ mol dm}^{-3}}$$

$$\text{pH} = -\log(1 \times 10^{-9}) \rightarrow \text{පිළිගැනීම 05}$$

$$\text{pH} = 9.0 // \rightarrow \text{ලකුණු 05}$$

$$(ii) \text{ ප්‍රථමයෙන් NaOH ප්‍රමාණය} = 1 \times 10^{-5} \text{ mol dm}^{-3}$$

$$\text{ප්‍රතිචක්‍රයේ } \text{Mg}^{2+} \text{ ප්‍රමාණය} = 1 \times 10^{-4} \text{ mol dm}^{-3}$$

$$I_p (\text{Mg(OH)}_2) = [\text{Mg}^{2+}][\text{OH}^-]^2 \rightarrow \text{ලකුණු 05}$$

$$= (1 \times 10^{-4} \text{ mol dm}^{-3})(1 \times 10^{-5} \text{ mol dm}^{-3})^2$$

$$= 1 \times 10^{-14} (\text{mol dm}^{-3})^3 \rightarrow \text{ලකුණු 05}$$

$I_p < K_{sp}$ බැවින් Mg(OH)_2 අවස්ථාවේ නොපවතී.

$$(iii) K_{sp} = [\text{Mg}^{2+}][\text{OH}^-]^2 \rightarrow \text{ලකුණු 05}$$

$$[\text{OH}^-] = \sqrt{\frac{8.5 \times 10^{-12} (\text{mol dm}^{-3})^3}{1 \times 10^{-4} \text{ mol dm}^{-3}}}$$

$$= 2.92 \times 10^{-4} \text{ mol dm}^{-3}$$

→ ලකුණු 05

$$\text{NaOH වශයෙන්} = 2.92 \times 10^{-4} \text{ mol dm}^{-3} \times 40 \text{ g mol}^{-1}$$

$$= 116.8 \times 10^{-4} \text{ g}$$

$$\text{නිපද්‍රව්‍යයේ පවතින NaOH වශයෙන්} = 116.8 \times 10^{-4} - 4 \times 10^{-4} \text{ g}$$

$$= 112.8 \times 10^{-4} \text{ g} \rightarrow \text{ලකුණු 05}$$

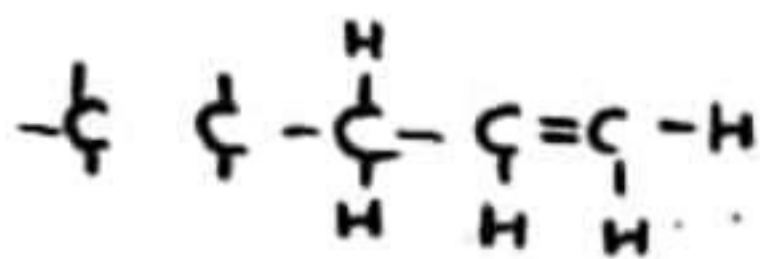
$$\text{NaOH වශයෙන් පවතින වර්ගය}$$

$$= 112.8 \times 10^{-4} \times 10^3 \text{ mg}$$

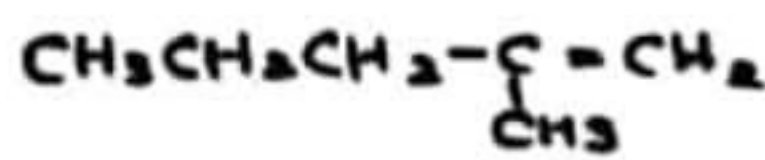
$$= 11.28 \text{ mg} //$$

→ ලකුණු 05

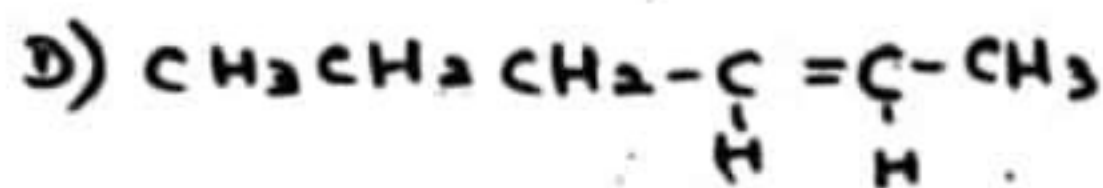
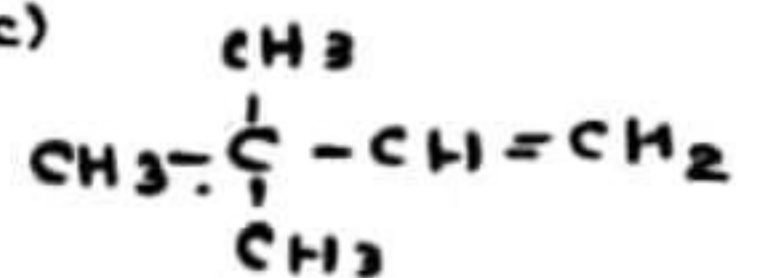
$$(a) \text{ ප්‍රතිචක්‍රයේ ප්‍රමාණය} = \boxed{55}$$



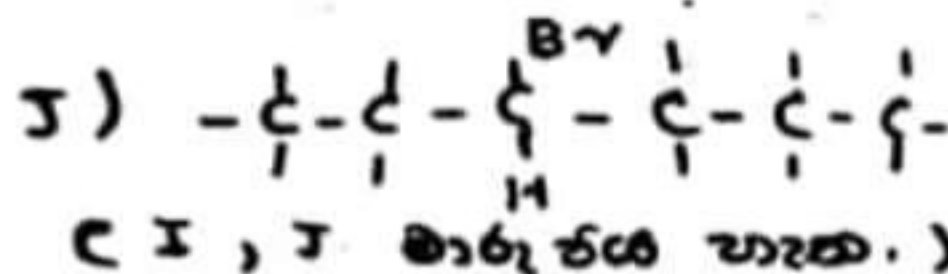
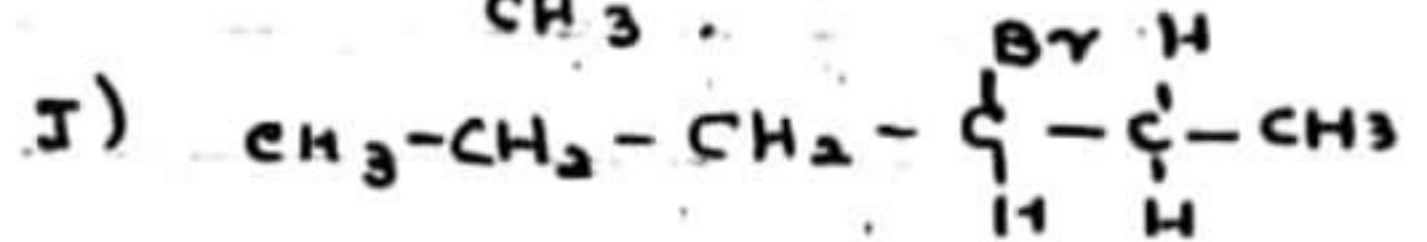
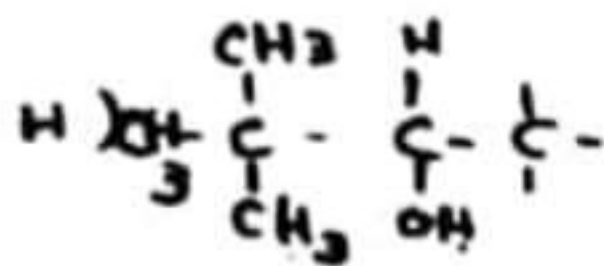
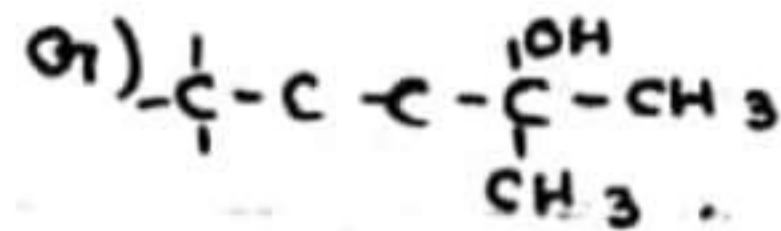
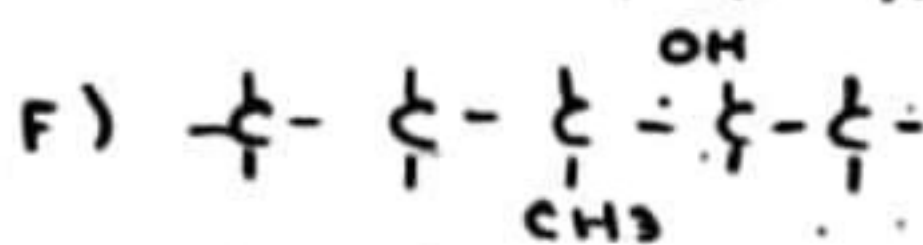
B)



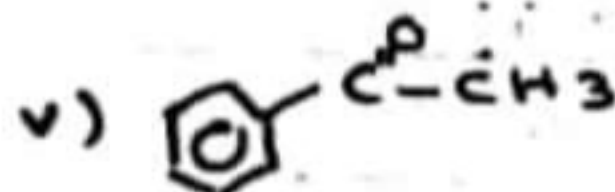
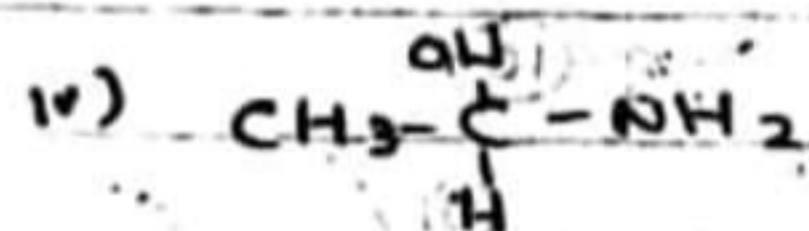
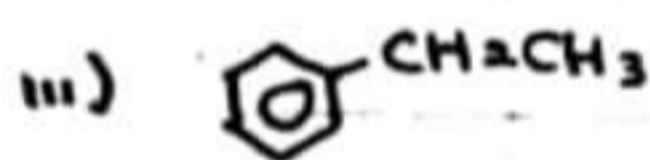
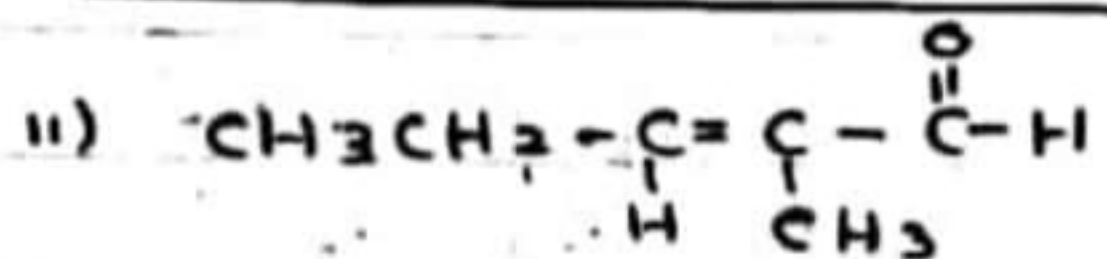
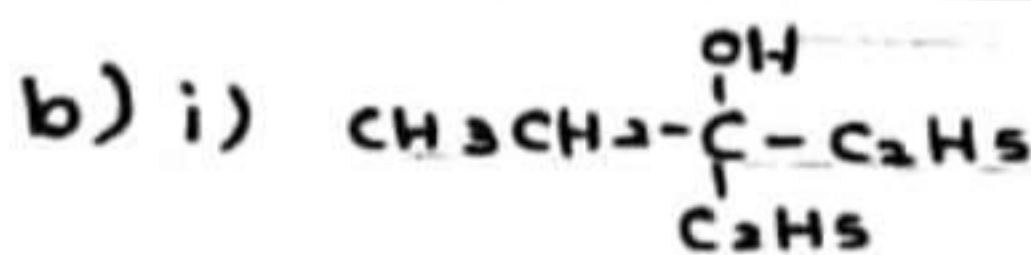
C)



(C, E is also possible)



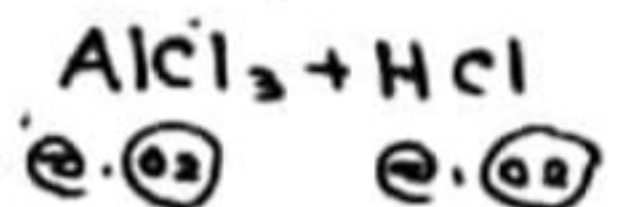
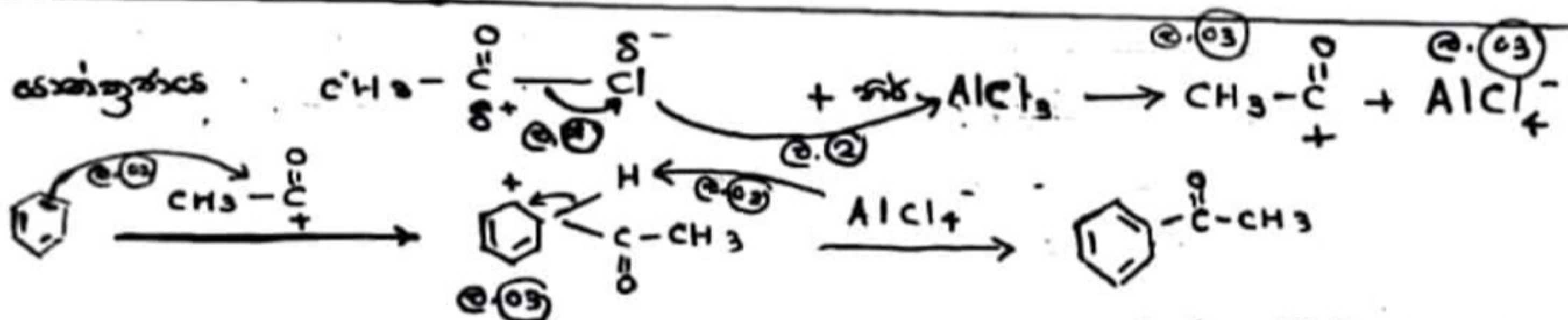
Answer - 5 x 10



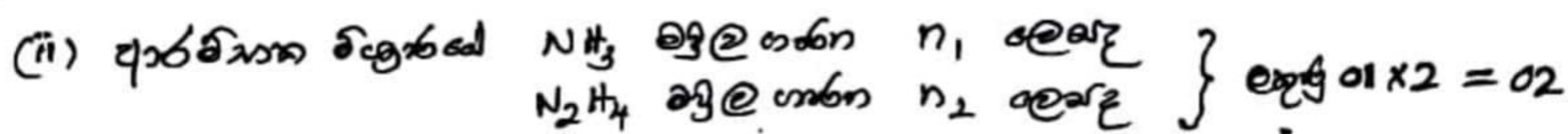
Answer 5 x 5



Answer 5



22 A/L 46 [papers grp]



විශේෂයෙන්ම NH_3 මුළු දෙකක් N_2 හෝ H_2 ආශ්‍රිතව 04 කිද
 N_2H_4 මුළුතමන් N_2 හෝ H_2 මුළු 03 කිද

අවසාන ඵලය විශ්ලේෂණය කළ විට ප්‍රතිඵලය ලැබෙන = $2n_1 + 3n_2 \rightarrow$ ලැබුණු = 04

$$5 \times 10^4 \text{ Pa} \times V = (n_1 + n_2) \text{ mol} \times R \times 300 \text{ K} \quad \text{--- (1)} \quad \begin{matrix} (2+1) \times 4 \\ = 12 \end{matrix}$$

$$4.5 \times 10^5 \times V = (2n_1 + 3n_2) \text{ mol} \times R \times 1200 \text{ K} \quad \text{--- (2)} \quad (2+1) \times 4 = 12$$

$$\frac{2n_1 + 3n_2}{n_1 + n_2} = \frac{9}{4} \quad \text{or} \quad \frac{2(n_1 + n_2) + n_2}{n_1 + n_2} = \frac{9}{4}$$

$$\therefore N_2H_4 \text{ ର } \text{ମାତ୍ରା} \left(\frac{n_2}{n_1 + n_2} \right) = \frac{1}{4} \longrightarrow \text{ଭାଗ} = 10$$

(iii) ଦ୍ଵାରକର ଚକ୍ରରେ NH_3 ଉପରେ ଆକର୍ଷଣ = $1 - \frac{1}{4} = \frac{3}{4} \rightarrow$ ଉତ୍ତର = 03

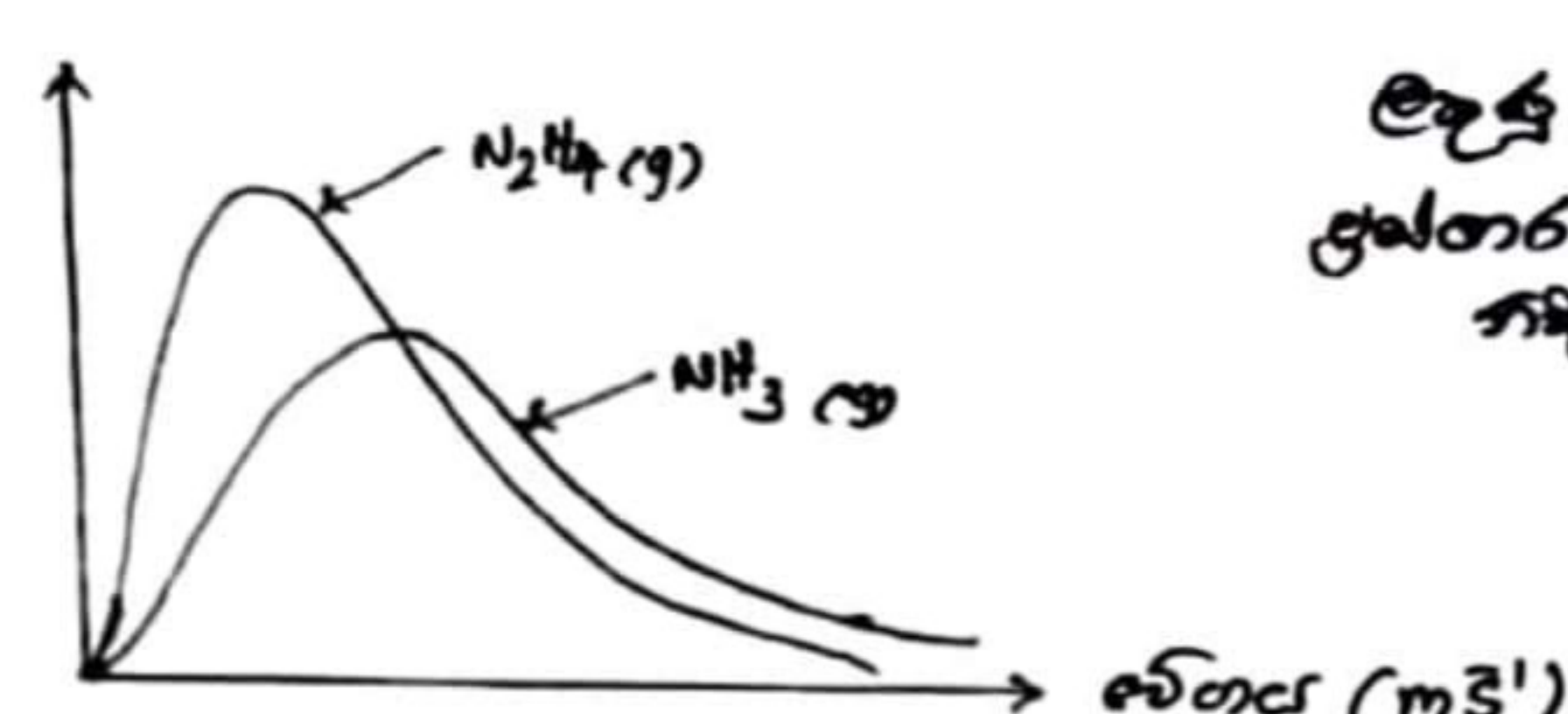
ഉദ്ദാഹരണം $\frac{3}{4} \times 100\%$

$$= \underline{75\%} \rightarrow \text{odds} = 0.5$$

(iv) * සියලුම චායු පරිපූරණ ලෙස ගැණිතයා බව $\rightarrow$ ලිපි=02

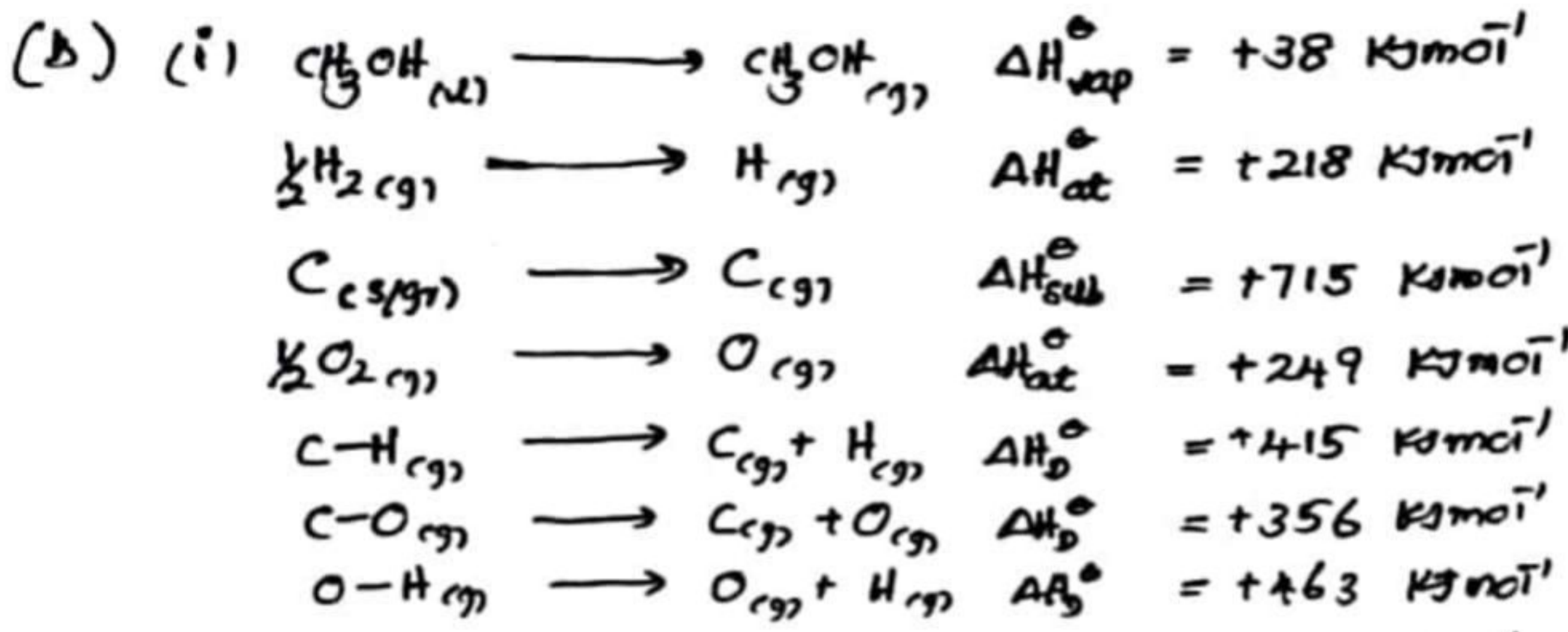
(v)

අග්‍ර
ප්‍රමාණය

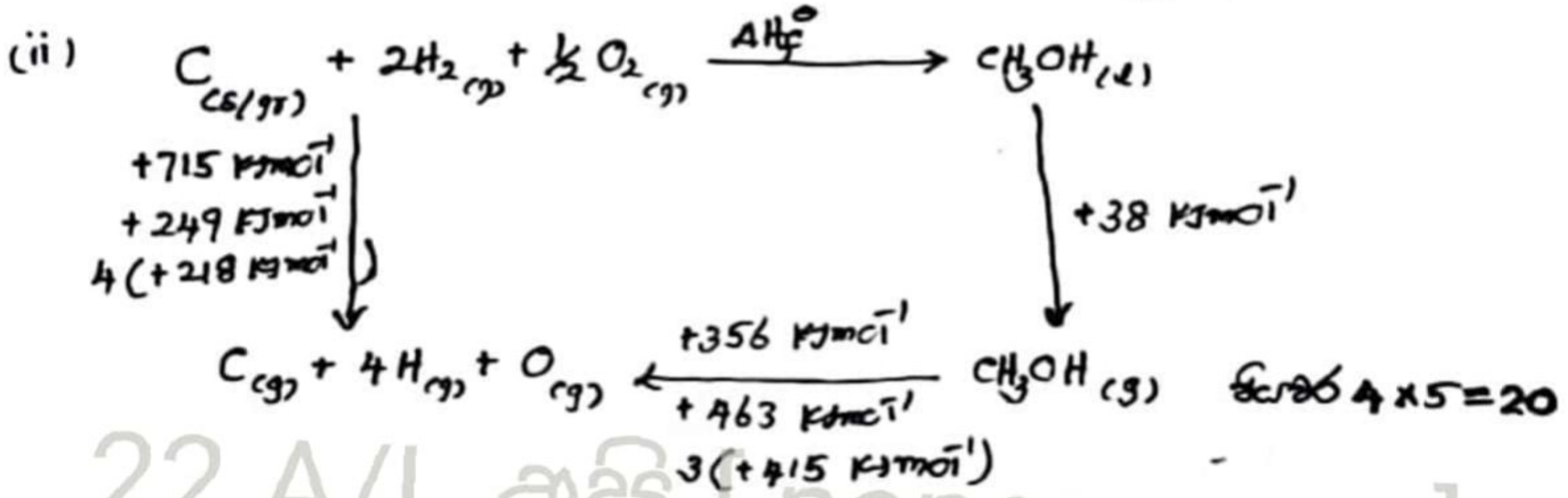


ලෙණ $2 \times 4 = 0$
 ප්‍රමාණය 02
 නිකුත් කළේ = 02

(d) කොමස් සඳහා වූ ලෙණ = **75**



ලෙණ $04 \times 7 = 28$



හෙය් නිකුත් කළේ,

$$\Delta H_f^\circ + 38 \text{ KJmol}^{-1} + 356 \text{ KJmol}^{-1} + 463 \text{ KJmol}^{-1} + 3(+415 \text{ KJmol}^{-1}) = +715 \text{ KJmol}^{-1} + 249 \text{ KJmol}^{-1} + 4(218 \text{ KJmol}^{-1})$$

$$\Delta H_f^\circ + 2102 \text{ KJmol}^{-1} = +1836 \text{ KJmol}^{-1}$$

$$\Delta H_f^\circ = -266 \text{ KJmol}^{-1} //$$

ආදායම
(ලෙණ $2+1$) x 7 = 21

අනුමාන විචල්‍ය ලෙණ 5+1 = 06

ම.ප්‍ර. සහකාරීන් අයුරු සිතුවම් කිරීමට සිතා ප්‍රශ්න ප්‍රකාශන
 ගණනය කර නිකුත් කළේ විචල්‍ය ලෙණයන් අනුමාන ලෙණ
 ලෙණයන් කරන.

(b) කොමස් වූ ලෙණ = $28 + 20 + 21 + 6 = \mathbf{75}$

1. X, Y, Z හිදී ප්‍රතික්‍රියා P, Q, R හි

$$R = k [X]^p [Y]^q [Z]^r$$

$$2.0 \times 10^{-4} = k (0.1)^p (0.1)^q (0.1)^r \quad \text{--- ①}$$

$$1.6 \times 10^{-3} = k (0.2)^p (0.1)^q (0.1)^r \quad \text{--- ②}$$

$$3.2 \times 10^{-3} = k (0.2)^p (0.1)^q (0.1)^r \quad \text{--- ③}$$

$$10.8 \times 10^{-3} = k (0.3)^p (0.2)^q (0.2)^r \quad \text{--- ④}$$

ඔත්තු 05

$$\frac{②}{①} = \frac{1.6 \times 10^{-3}}{2 \times 10^{-4}} = \frac{(0.2)^p}{(0.1)^p}$$

$$8 = 2^p$$

$$p = 3 \quad \text{ඔත්තු 05}$$

$$\frac{③}{②} = \frac{3.2 \times 10^{-3}}{1.6 \times 10^{-3}} = \frac{(0.2)^p}{(0.1)^q}$$

$$2 = 2^q$$

$$q = 1 \quad \text{ඔත්තු 05}$$

$$\frac{④}{③} = \frac{10.8 \times 10^{-3}}{3.2 \times 10^{-3}} = \frac{(0.3)^p (0.2)^q}{(0.2)^p (0.1)^q}$$

$$3.375 = \frac{(0.3)^p (0.2)^1}{(0.2)^p (0.1)^1}$$

$$3.375 = \frac{(0.3)^p (0.2)}{(0.2)^p (0.1)}$$

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ඔත්තු 05

$$\text{සමස්ත පෙළ} = 3 + 1 + 0 = 4 \quad \text{ඔත්තු 05}$$

$$(ii) R = k (0.3)^p (0.3)^q (0.3)^r$$

$$R = k (0.3)^3 (0.3)^1 (0.3)^0 \quad \text{--- ⑤}$$

$$① \text{ න් } 2 \times 10^{-4} = k (0.1)^3 (0.1)^2 (0.1)^0 \quad \text{--- ⑥}$$

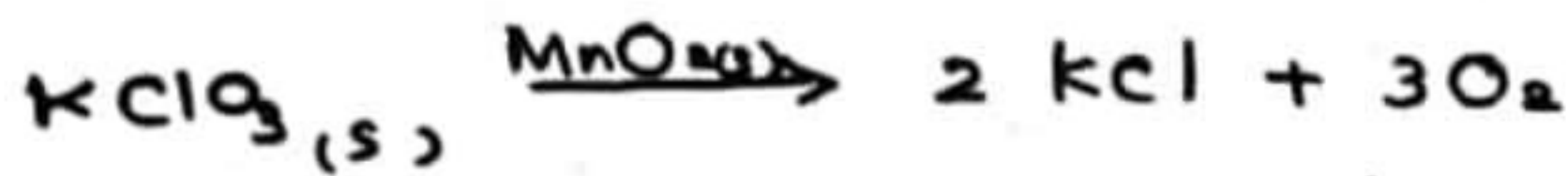
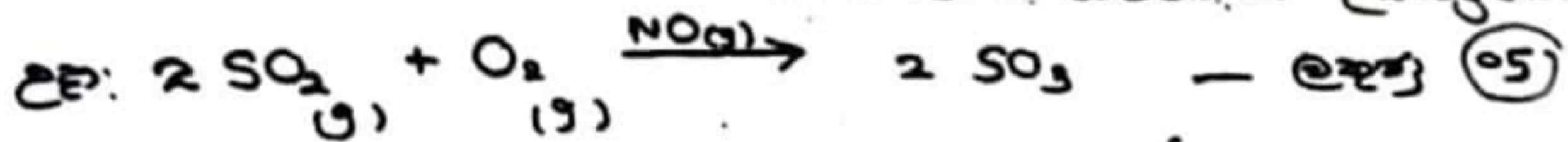
$$\therefore R = 3^3 \times 3 \times 2 \times 10^{-4} \text{ mol dm}^{-3} \text{ s}^{-1}$$

$$= 162 \times 10^{-4} \text{ mol dm}^{-3} \text{ s}^{-1}$$

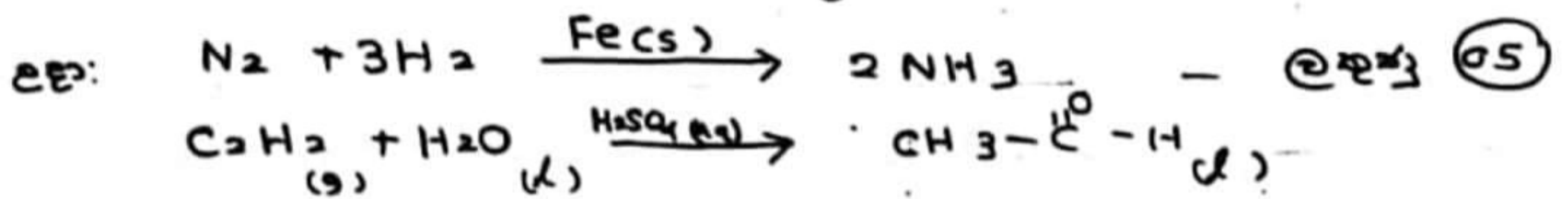
$$iii) \frac{1.62 \times 10^{-2}}{(0.3)^3 (0.3)^1} = k \quad \text{ඔත්තු 05}$$



1) සමජනික උත්ප්‍රේරක - උත්ප්‍රේරක හා ප්‍රතික්‍රියක එකම න්‍යායයේ
 නම් එම සමජනික උත්ප්‍රේරකයේ. ලකුණ



විෂම ජනිත උත්ප්‍රේරක - උත්ප්‍රේරකය හා ප්‍රතික්‍රියක වෙනස්
 න්‍යායවල නම් එය විෂමජනික
 උත්ප්‍රේරකයක් වේ.



22 A/L අපි [papers grp]

രാജ്യത്തിന്റെ മൂലകളെക്കുറിച്ച് ചിന്തിക്കുക

1) $P_A = P_T \cdot Y_A$ P_T - രാജ്യത്തിന്റെ മൂലകളെക്കുറിച്ച് ചിന്തിക്കുക

(05) P_A - A ന്റെ മൂലകളെക്കുറിച്ച് ചിന്തിക്കുക

$P_B = P_T \cdot Y_B$ P_B - B ന്റെ മൂലകളെക്കുറിച്ച് ചിന്തിക്കുക

$$P_A + P_B = P_T \quad (05)$$

2) $P_A = P_A^0 \cdot x_A$ (05)

$$P_B = P_B^0 \cdot x_B \quad (05)$$

$$Y_A = \frac{P_A^0 \cdot x_A}{(P_A^0 \cdot x_A + P_B^0 \cdot x_B)} \quad (20)$$

3) P_B - B ന്റെ മൂലകളെക്കുറിച്ച് ചിന്തിക്കുക

P_T - രാജ്യത്തിന്റെ മൂലകളെക്കുറിച്ച് ചിന്തിക്കുക

P - മൂലകളെക്കുറിച്ച് ചിന്തിക്കുക

$$P_B = P_B^0 \cdot x_B$$

$$= 5 \times 10^4 \text{ pa} \times \frac{2}{5} \quad (03)$$

$$= 2 \times 10^4 \text{ pa} \quad (04+01)$$

$$P_T = P_T^0 \cdot x_T \quad (02)$$

$$= 2 \times 10^4 \text{ pa} \times \frac{3}{5}$$

$$= 1.2 \times 10^4 \text{ pa}$$

$$P = P_B + P_T$$

$$= 2 \times 10^4 \text{ pa} + 1.2 \times 10^4 \text{ pa}$$

$$= 3.2 \times 10^4 \text{ pa} \quad (04+1)$$

$$P_B = P \cdot Y_B$$

$$Y_B = \frac{2 \times 10^4 \text{ pa}}{3.2 \times 10^4 \text{ pa}}$$

$$= \frac{5}{8} \quad (05)$$

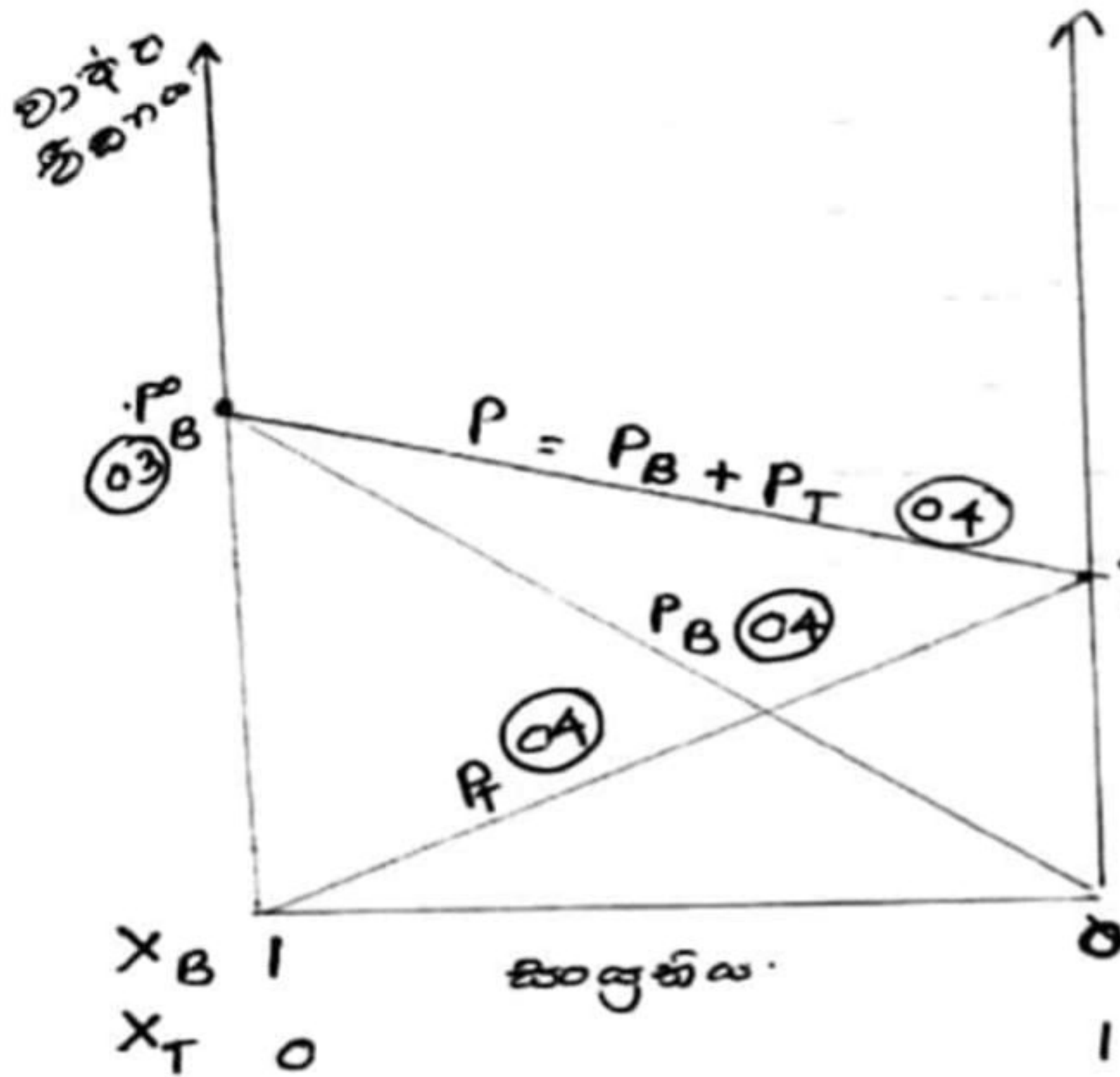
$$P_T = P \cdot Y_T$$

$$Y_T = \frac{1.2 \times 10^4 \text{ pa}}{3.2 \times 10^4 \text{ pa}}$$

$$= \frac{3}{8} \quad (05)$$

(1) $3.2 \times 10^4 \text{ Pa}$. (05)

ලකුණු (2)



X අංශයේ γ අංශයේ
තවදුරටත් ලකුණු කිරීමේ
(04+03)

මුළු ලකුණු (25)

b (b) මුළු ලකුණු - 75

22 A/L අපි [papers grp]

- $ZnSO_4$ ද්‍රාවණය - ලකුණු (05)

- $CuSO_4$ ද්‍රාවණය - ලකුණු (05)

ii) $+ \text{අයුය} - Cu$
 $- \text{අයුය} - Zn$ } ලකුණු (05)

iii) ඉන්ෂෝඩිය - $Zn \rightarrow Zn^{+2}_{(aq)} + 2e^-$ - ලකුණු (05)

ක්ෂේත්‍රීය $Cu^{+2}_{(aq)} + 2e^- \rightarrow Cu_{(s)}$ - ලකුණු (05)

iv) $Zn_{(s)} + Cu^{+2}_{(aq)} \rightarrow Zn^{+2}_{(aq)} + Cu_{(s)}$ - ලකුණු (10)

v) $Zn / Zn^{+2}_{(aq)} // Cu^{+2}_{(aq)} / Cu_{(s)}$ ලකුණු (10)
 (1 moldm^{-3})

vi) $E^{\ominus}_{cell} = E^{\ominus}_{RHS} - E^{\ominus}_{LHS}$
 $= 0.34 - (-0.76)$
 $= 1.1V$ ලකුණු (10)

vii) $\frac{W_A}{W_{Ag}} = \frac{E_A}{E_{Ag}}$
 $\frac{0.3g}{0.2g} = \frac{E_A}{108}$
 $E_A = \frac{108 \times 0.3}{0.2}$
 $= 162$

∴ A වල රසායනික සමතුලිතය 162
 $E_A = \frac{A \text{ වල ස.ප.ප.}}{A \text{ වල සංයුජතාවය}}$
 $162 = \frac{A \text{ වල ස.ප.ප.}}{A \text{ වල ස.ප.ප.}}$
 $A \text{ වල ස.ප.ප.} = 162$

ලකුණු - (10)

viii) භෞතිකයෙන් පදනම් කළ විචල්යතාවය පිළිබඳ දෙවන නියමය.

නියමය - කොන් පදනම් විචල්යතාවයන් තුළින් එකම ආරෝපණ ප්‍රමාණයක් ගන්නා භෞතිකයෙන් පදනම් කළ විචල්යතාවයන් සමාන වන බව පෙන්වා දෙන අනුපාතය එමගින් රසායනික සමතුලිත ආරෝපණයට සමාන වේ.

ලකුණු (10)

b) i) Co ලකුණු (05)

ii) $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^7$ ලකුණු (05)

iii) $[Co(H_2O)_6]^{+2}$
 ස්ථායී
 අක්ෂිකාලීය ලකුණු (05)

$[CoCl_4]^{-2}$
 නිල්
 ඛණ්ඩකාලීය ලකුණු (05)

hexaaquacobalt(III) ion ලකුණු (05)

tetrachloridocobaltate(III) ලකුණු (05)

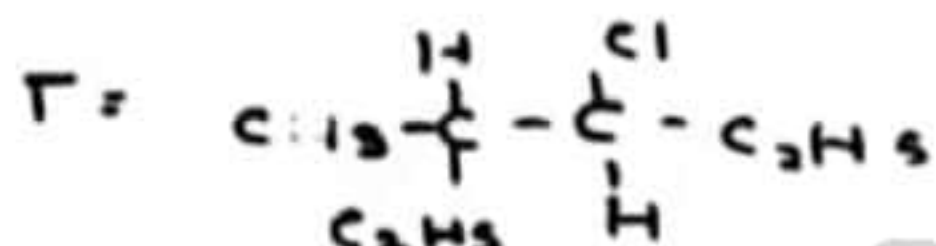
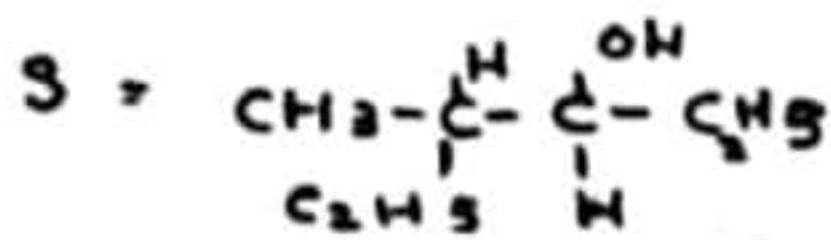
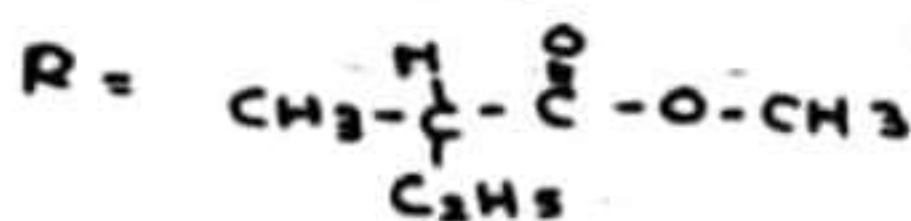
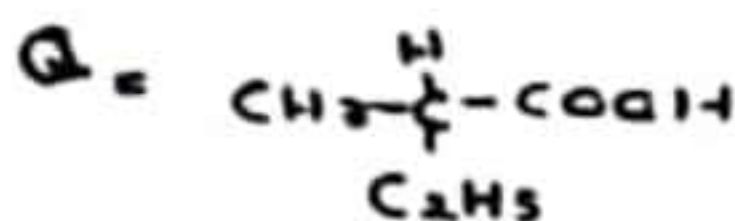
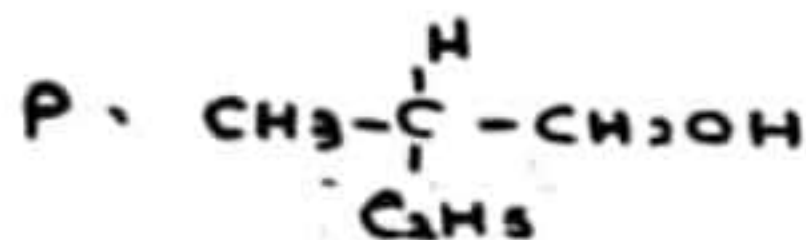
iv) ක්ෂායකාලීන හා දායක ලකුණු (05)

v) -

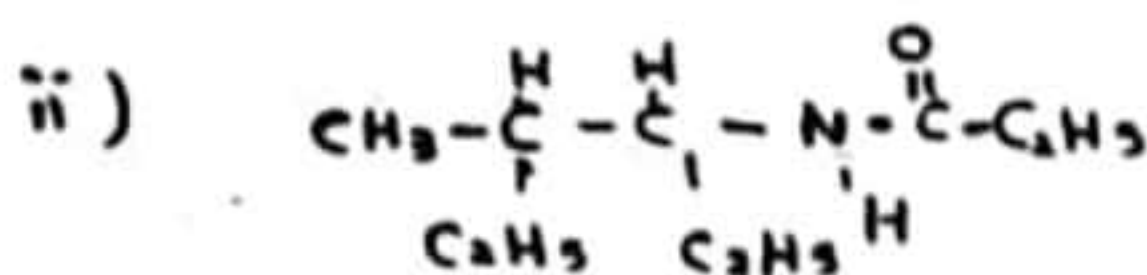
- vi) a) $\text{Co}(\text{OH})_2 \downarrow$ - ලකුණු 05
 සහජ තර් - ලකුණු 05
- b) $[\text{Co}(\text{NH}_3)_6]^{++}$ - ලකුණු 05
 න්‍යායාති ප්‍රාග්ධනය - ලකුණු 05
- c) $[\text{Co}(\text{NH}_3)_6]^{+3}$ - ලකුණු 05
 න්‍යාය ප්‍රාග්ධනය - ලකුණු 05

22 A/L අපි [papers grp]

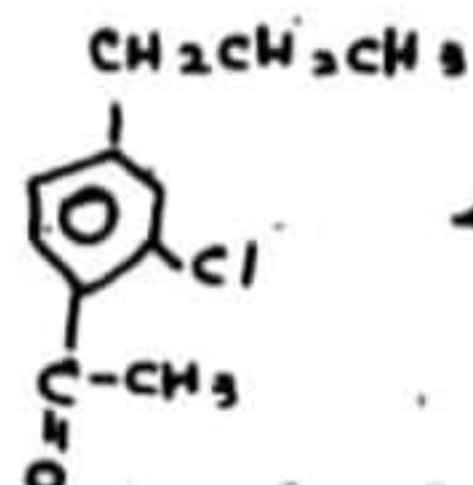
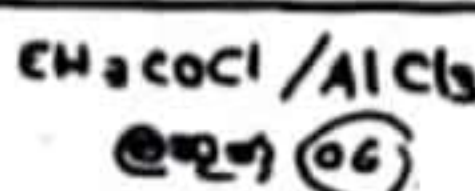
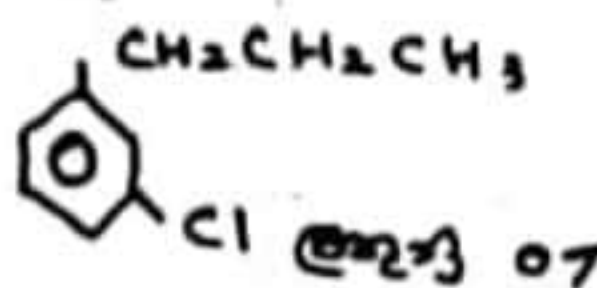
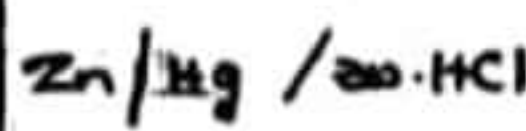
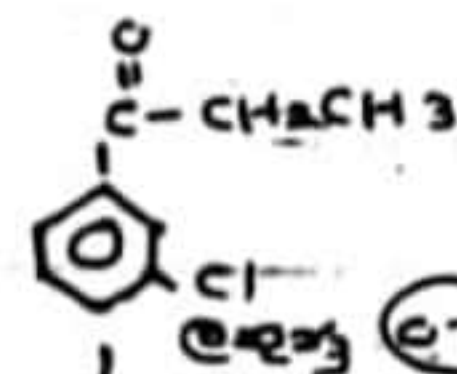
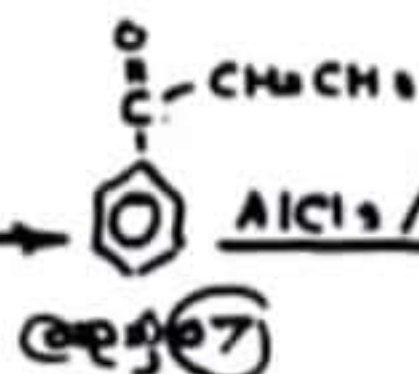
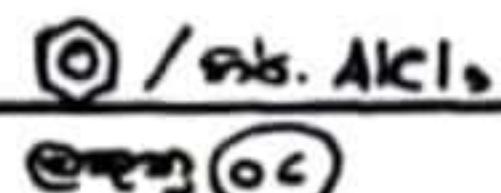
06 a) ii



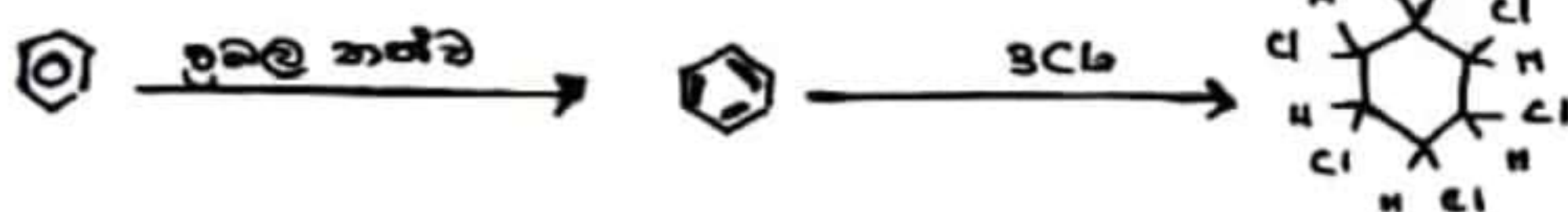
ලකුණු 7x5 = 35



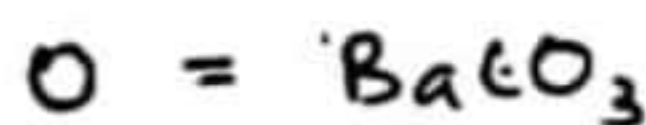
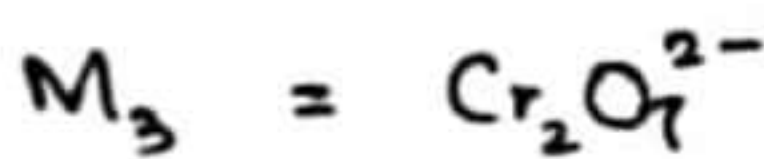
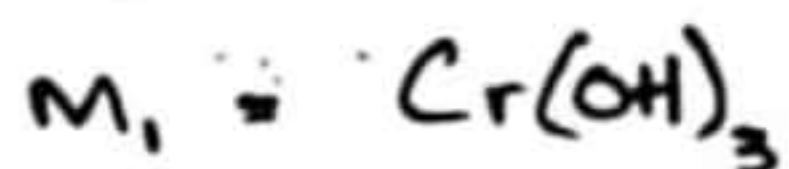
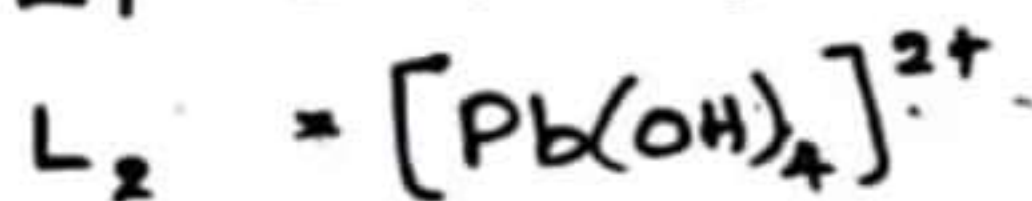
ලකුණු 10



- c) 1. බෙන්සීන්හිල C-C බන්ධන මෙ දිශින් කැපෙන විට
i) 2. බෙන්සීන්හිල C-C බන්ධන දිග C-C නම් බන්ධනයක දිග හා C-C දිගින්
බන්ධනයක දිගෙහි ආසන්නතම වශයෙන් වේ.
3. බෙන්සීන් මුළුමනින්ම ගණනය කෙරුණු වුවද මුළුමනින්ම ගණනය වන අයුරින්.
(තවදුරටත් ගණනය) ලකුණු 3x5 = 15
ii) බෙන්සීන් ප්‍රබල කැපී පෙනෙන නිශ්චිතතාවයක් ඇති අතර
බෙන්සීන් ප්‍රබල කැපී පෙනෙන නිශ්චිතතාවයක් ඇති අතර (ලකුණු 05)

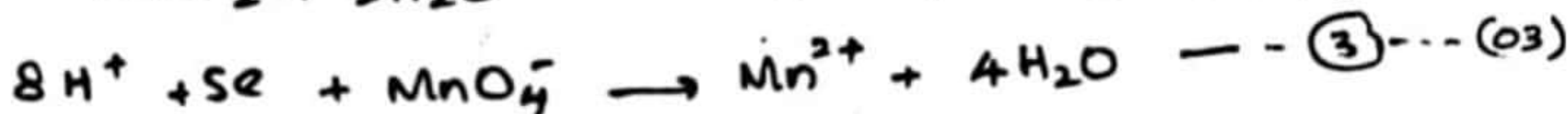
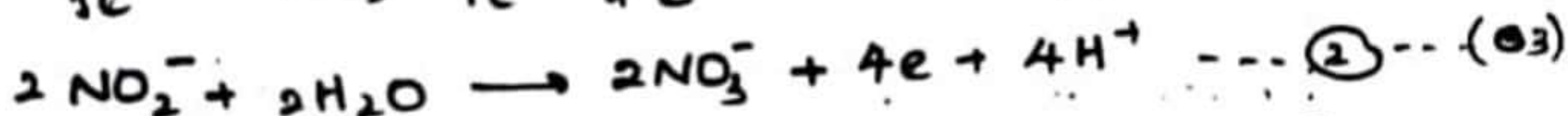


ලකුණු 10



$(10 \times 6 = 60)$

b). $Fe(NO_2)_2$ and MnO_4^- reaction.



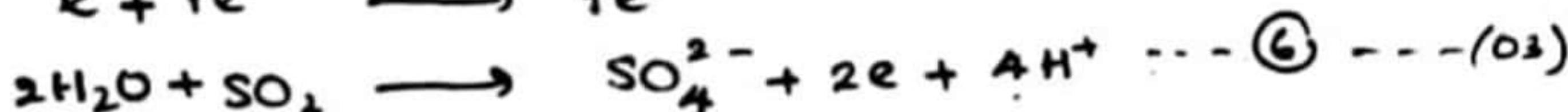
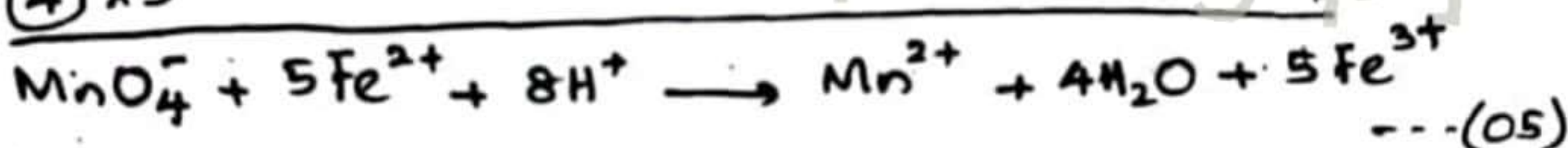
$\textcircled{1} + \textcircled{2} + \textcircled{3}$



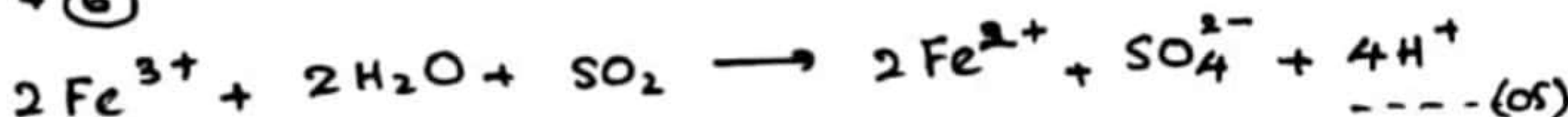
Fe^{2+} and MnO_4^- reaction, $\dots \dots (05)$



$\textcircled{3} + \textcircled{4} \times 5$



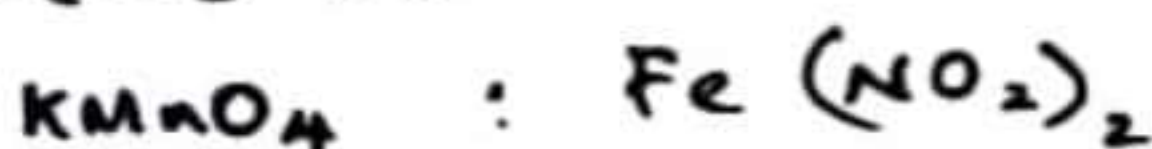
$\textcircled{5} \times 2 + \textcircled{6}$



or



Example ①



1 : 1

$\dots \dots (02)$

(17)



or

$$KMnO_4 \text{ ខ្លួន } = 0.2 \text{ mol dm}^{-3} \times 25 \times 10^{-3} \text{ dm}^3$$

$$= 0.005 \text{ mol} = 5 \times 10^{-3} \text{ mol.}$$

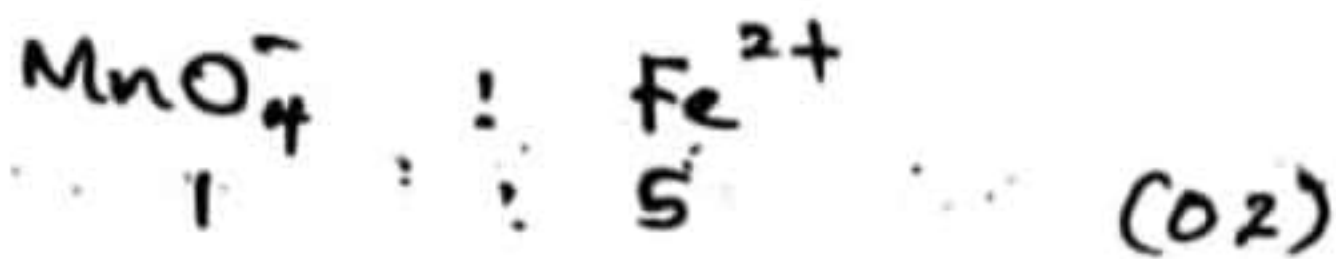
$$\therefore Fe(NO_2)_2 \text{ " " } = 0.005 \text{ mol} = 5 \times 10^{-3} \text{ mol. (02)}$$

$$Fe^{2+} \text{ " " } = 5 \times 10^{-3} \text{ mol. (02)}$$

ឆ្លើយ (2) :

$$KMnO_4 \text{ ខ្លួន } = 0.2 \text{ mol dm}^{-3} \times 31.20 \times 10^{-3} \text{ dm}^3$$

$$= 6.24 \times 10^{-3} \text{ mol (03)}$$



$$\therefore Fe^{2+} \text{ ខ្លួន } = 6.24 \times 10^{-3} \times 5 \text{ mol}$$

$$= 31.2 \times 10^{-3} \text{ mol. (03)}$$

ឆ្លើយ (3)

$$BaSO_4 \text{ ខ្លួន } = \frac{6.999}{233 \text{ g mol}^{-1}} = 0.03 \text{ mol (03)}$$

$$Fe^{3+} \text{ " " } = 0.02 \text{ mol.}$$

$$Fe_2(SO_4)_3 \text{ ខ្លួន } = 0.01 \text{ mol. (02)}$$

$$250 \text{ cm}^3 \text{ " } = 0.01 \text{ mol} \times 10 = 0.1 \text{ mol. (02)}$$

$$Fe_2(SO_4)_3 \text{ ឆ្នាំ } = 0.1 \text{ mol} \times 400 \text{ g mol}^{-1} \quad (02)$$

$$= 40 \text{ g.}$$

$$\text{ " ឆ្នាំ } = \frac{40 \text{ g} \times 100}{75 \text{ g}} = 53.33\% \quad (04)$$

$$250 \text{ cm}^3 Fe(NO_2)_2 \text{ ខ្លួន } = 5 \times 10^{-3} \times \frac{250 \text{ cm}^3}{25 \text{ cm}^3} = 5 \times 10^{-2} \text{ mol} \quad (02)$$

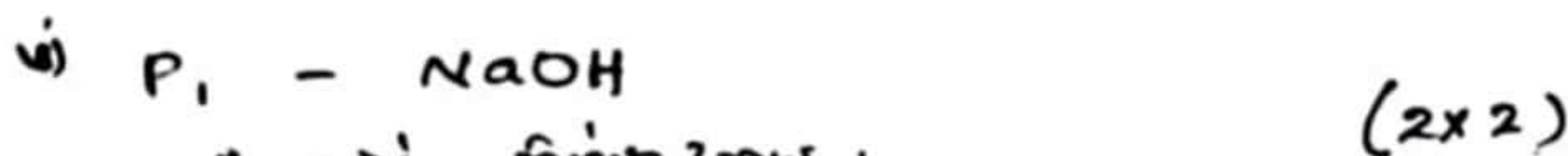
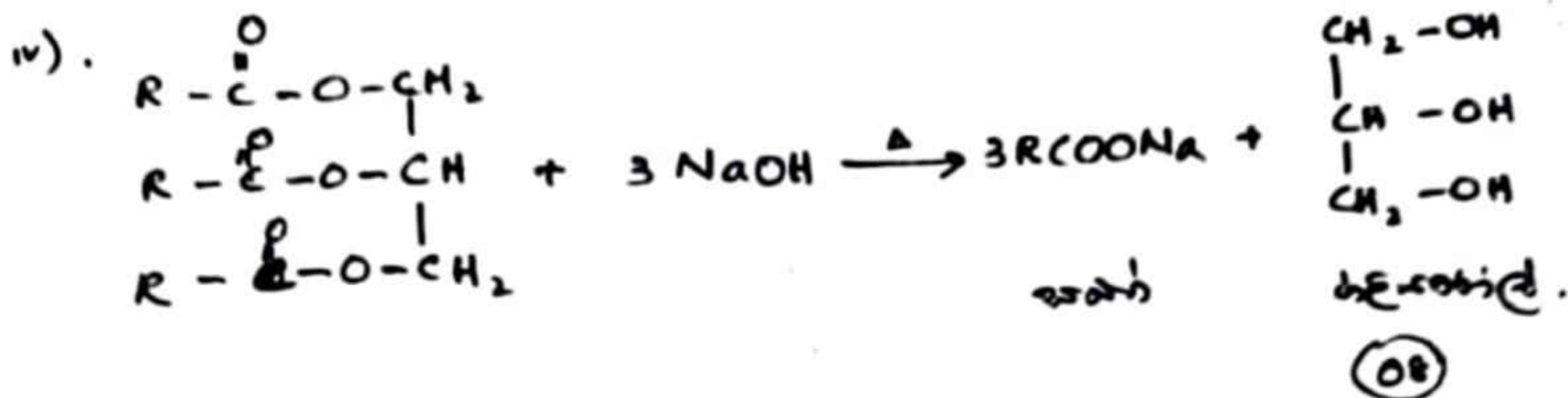
$$\text{ " ឆ្នាំ } = 5 \times 10^{-2} \text{ mol} \times 148 \text{ g mol}^{-1} \quad (02)$$

$$= 7.4 \text{ g.}$$

$$\text{ ឆ្នាំ } = \frac{7.4 \text{ g} \times 100}{75 \text{ g}} = 9.87\% \quad (04)$$

(18)

(15)



- * සමාන නිෂ්පාදනය.
- * ප්‍රබල ඇම්බානි ලෙස භාවිතය.
- * නිකුත් කිරීම, නිකුත් කිරීම හා නිකුත් කිරීම.
- * අපද්‍රව්‍ය නිෂ්පාදන ක්‍රියාවලියේදී සෑදෙන වෙනත් නිෂ්පාදන ලෙස ආකල්ප කිරීම.

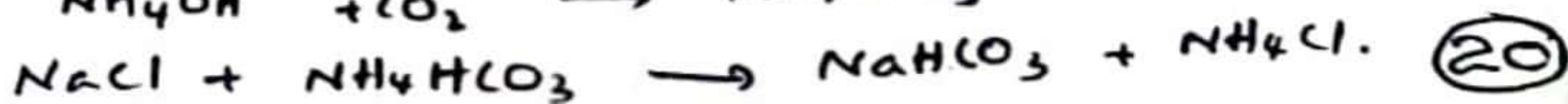
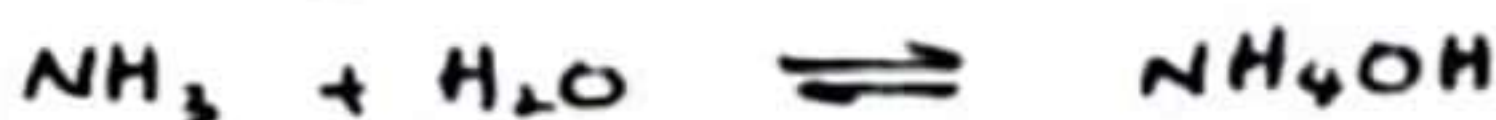


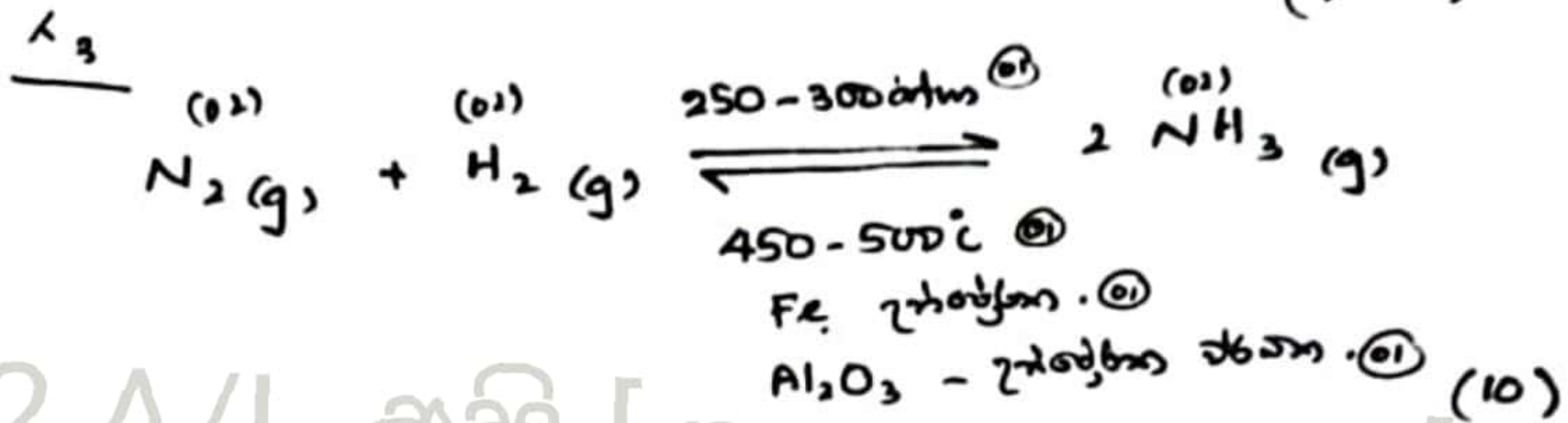
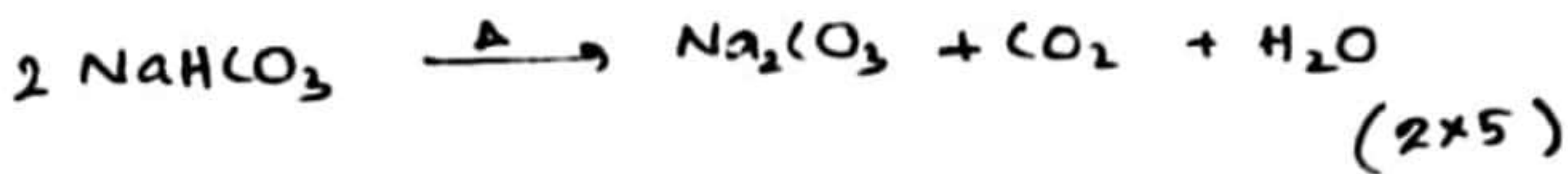
- * ජලයේ නිෂ්පාදනය සිදු කිරීම.
- * සමාන හා සමාන නිෂ්පාදන ක්‍රියාවලියේදී සෑදෙන වෙනත් නිෂ්පාදන ලෙස ආකල්ප කිරීම.
- * සෑදෙන වෙනත් නිෂ්පාදන ලෙස ආකල්ප කිරීම.
- * නිෂ්පාදන ක්‍රියාවලිය.



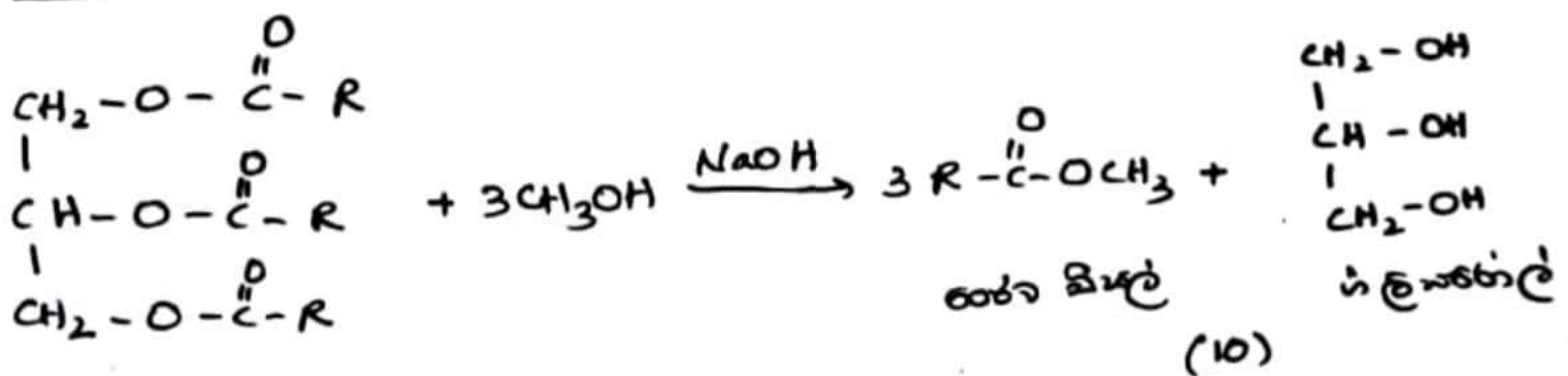
- * HCl නිෂ්පාදනය.
- * NH_3 නිෂ්පාදනය.
- * අනෙකුත් වෙනත් නිෂ්පාදන ක්‍රියාවලියේදී සෑදෙන වෙනත් නිෂ්පාදන ලෙස ආකල්ප කිරීම.

x_2





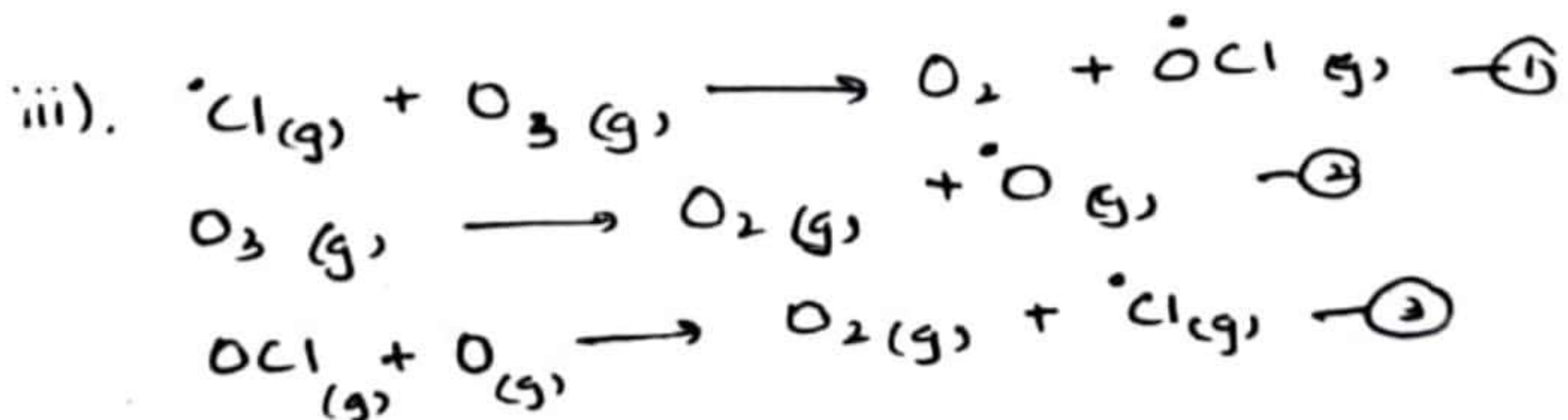
X₅



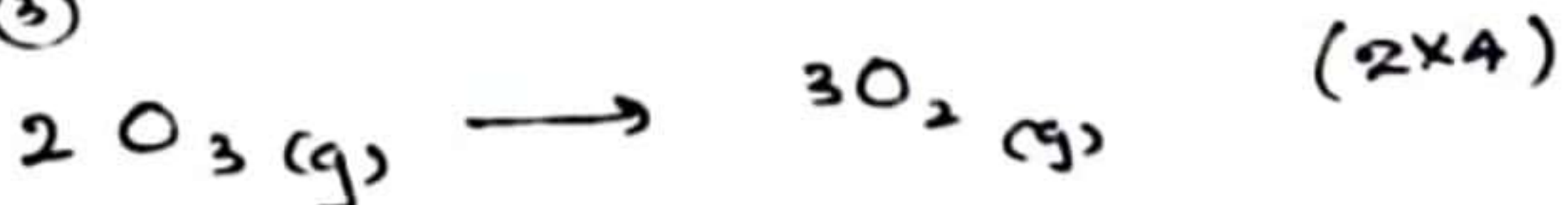
viii). CO₂ ... (04)

b i). ප්‍රබල ගිණිකැලි ජලීය. (5 අංකයක් සහිත) (04)

ii). නයිට්‍රික් ඔක්සයිඩ් (NO) (3x2)
bromofluorocarbon.



① + ② + ③



iv). HFC ... (05)

v). හෝලිනු ලැබූ ප්‍රත්‍යාපෝෂක ... (05)
(2)

vi). ආර්ථික ප්‍රතිපත්ති
 ක්‍රියාත්මක කිරීම. (3x2)

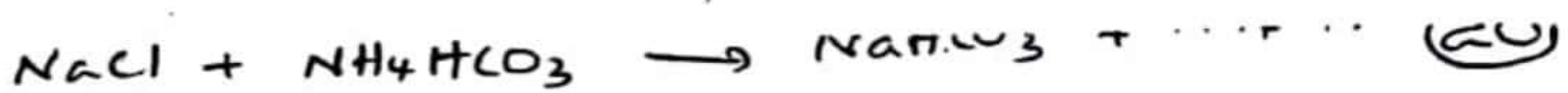
c) i) ව්‍යවස්ථාපිත
 නීති
 සහතික කළ. (3x3)

ii). ආර්ථික ප්‍රතිපත්ති - ව්‍යවස්ථාපිත (03x2)
 ප්‍රතිපත්ති ප්‍රතිපත්ති - සහතික කළ

iii). කෙටිකාලීන ආර්ථික විකේත නිකුත්. (03)

22 A/L අපි [papers grp]

(22)



සංකේතය

(21) ② a) 3 ජිව්‍ය - බහුරූපී ආකාර 3කි.

④ a) 7 ජිව්‍ය - I සහ J එකම ප්‍රකාර සත්‍යය වුවේ.

A සාන්ද්‍ර H_2SO_4 සමඟ $\rightarrow$ F ලබාදේ.

9 ජිව්‍ය - B නොවස රචනා.

ප්‍රශ්න 2කට ජිව්‍යයන් සපයන්න.

11 ජිව්‍ය - C නොවස රචනා

ප්‍රශ්න 2කට ජිව්‍යයන් සපයන්න.

⑨ b.) Ba = 137 Fe = 56 N = 14 O = 16
S = 32 Cl = 35.5

⑩ a) 13 ජිව්‍ය - P, සංයෝගය (ඵලය) X_4 හේතුවෙන් X_5 දී
 X_5 හේතුවෙන් X_4 ලෙස හෙතෙමේ නිසා වූයේ.

③ a) ජිව්‍ය 05

$$K_{sp} Mg(OH)_2 = 8.5 \times 10^{-12} (mol dm^{-3})^3$$

⑤ a) ජිව්‍ය 09 400 K සහ 300 K ලෙස නිර්දේශ
විය යුතුය.